

Appl. No. 10/707,258
Amdt. dated August 17, 2005
Reply to Office action of May 18, 2005

Claim 6 (original) The color filter structure of claim 1 wherein the substrate is a transparent glass substrate.

Claim 7 (cancelled)

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Claim 8 (original) The color filter structure of claim 1 wherein the overlapping region serves as a black matrix.

10 Claim 9 (original) The color filter structure of claim 1 wherein the substrate further comprises a black matrix layer positioned between any two neighboring color filters.

15 Claim 10 (original) The color filter structure of claim 1 wherein the color filters comprising at least a first color filter, a second color filter, and a third color filter.

20 Claim 11 (original) The color filter structure of claim 10 wherein the first color filter has an inverse T-shaped structure, the second color filter has a stair-shaped structure, and the third color filter structure has a T-shaped structure.

25 Claim 12 (original) The color filter structure of claim 10 wherein the color filters comprise at least a red color filter, a green color filter, and a blue color filter.

Claim 13 (currently amended) A method for forming a color filter structure of a liquid crystal display (LCD), the method comprising:
providing a glass substrate;

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corresponding to the translucent region in the first color filter layer, the first pattern and the second pattern having different thicknesses.

5 Claim 18 (original) The method of claim 17 wherein steps of forming the second color filter comprises:

forming a second color filter layer on the glass substrate, the second color filter layer overlapping a portion of the first color filter layer;
and

10 performing a second photo process by the attenuated mask to form a third pattern in the second color filter layer, the third pattern overlapping the second pattern of the first color filter layer, and to form a fourth pattern having a thickness differing from a thickness of the third pattern in the second color filter layer, the third pattern
15 and the fourth pattern being coplanar.

Claim 19 (original) The method of claim 18 wherein the first photo process and the second photo process are performed under like conditions.

20 Claim 20 (cancelled)

Claim 21 (original) The method of claim 13 wherein the overlapping region serves as a black matrix.

25 Claim 22 (original) The method of claim 13 wherein the glass substrate further comprises a black matrix layer positioned between the first color filter and the second color filter adjacent to the first color filter.

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Claim 23 (new) A color filter structure of a liquid crystal display (LCD) comprising:

a substrate; and

a plurality of color filters coupling with each other on a surface of the substrate;

wherein an overlapping region exists between any two neighboring color filters, and each of the color filters positioned in the overlapping region has a uniform thickness.

Claim 24 (new) A method for forming a color filter structure of a liquid crystal display (LCD), the method comprising:

providing a glass substrate;

forming a first color filter on the glass substrate;

performing a first photo process with an attenuated mask to form a first

pattern and a second pattern in the first color filter layer, the first pattern and the second pattern having different thicknesses; and

forming a second color filter layer partially overlapping the first color filter layer on the glass substrate; and

performing a second photo process with the attenuated mask to form a

third pattern in the second color filter layer overlapping the second pattern of the first color filter layer, and a fourth pattern having a thickness differing from a thickness of the third pattern in the second color filter layer, the third pattern and the fourth pattern being coplanar.

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Claim 25 (new). A color filter structure of a liquid crystal display (LCD) comprising:

a substrate; and

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a plurality of color filters coupling with each other on a surface of the substrate;

wherein an overlapping region exists between any two neighboring color filters, each overlapping region and the color filters outside the
5 overlapping region are coplanar,

wherein the color filters comprising at least a first color filter, a second color filter, and a third color filter,

wherein the first color filter has an inverse T-shaped structure, the second color filter has a stair-shaped structure, and the third color filter
10 structure has a T-shaped structure.